**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

UNILOC 2017 LLC,	§ § §	
Plaintiff,	§	
v.	§	Case No. 2:18-CV-00501-JRG-RSP
GOOGLE LLC,	§ §	
Defendant.	§ §	

**CLAIM CONSTRUCTION
MEMORANDUM AND ORDER**

On January 6, 2020, the Court held a hearing to determine the proper construction of the disputed claim terms within United States Patent Nos. 6,452,515 ("the '515 Patent"). Having reviewed the arguments made by the parties at the hearing and in their claim construction briefing (Dkt. Nos. 139, 148, & 151), having considered the intrinsic evidence, and having made subsidiary factual findings about the extrinsic evidence, the Court hereby issues this Claim Construction Memorandum and Order. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc); *see also Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

TABLE OF CONTENTS

I.   BACKGROUND

Plaintiff Uniloc 2017 LLC ("Plaintiff" or "Uniloc") alleges that Defendant Google LLC ("Defendant" or "Google") infringes United States Patents No. 6,452,515 ("the '515 Patent").

Shortly before the start of the January 6, 2020 hearing, the Court provided the parties with preliminary constructions with the aim of focusing the parties' arguments and facilitating discussion. Those preliminary constructions are noted below within the discussion for each term.

II.   APPLICABLE LAW

A.   Claim Construction

This Court's claim construction analysis is guided by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the Federal Circuit reiterated that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Id.* at 1312. The starting point in construing such claims is their ordinary and customary meaning, which "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1312-13.

However, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* at 1313. For this reason, the specification is often 'the single best guide to the meaning of a disputed term.'" *Id*. at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979–81 (Fed.Cir.1995) (en banc), *aff'd*, 517 U.S. 370 (1996)) (internal quotation marks omitted). However, it is the claims, not the specification, which set forth the limits of the patentee's invention. *Id.* at 1312. Thus, "it is improper to read limitations from a preferred embodiment described in the specification—even if

it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004). Other asserted or unasserted claims can also aid in determining a claim's meaning. *See, e.g., Phillips*, 415 F.3d at 1314 (explaining that use of "steel baffles" and "baffles" implied that "baffles" did not inherently refer to objects made of steel).

The prosecution history also plays an important role in claim interpretation as intrinsic evidence of how the U.S. Patent and Trademark Office ("PTO") and the inventor understood the patent. *Id.* at 1317, *see also Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1361 (Fed. Cir. 2017) (applying this principle in the context of *inter partes* review proceedings); *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that "a patentee's statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation"). However, "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.* at 1318, *see also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (noting that ambiguous prosecution history may be "unhelpful as an interpretive resource").

Additionally, courts may rely on extrinsic evidence such as "expert and inventor testimony, dictionaries, and learned treatises." *Id.* at 1317. As the Supreme Court recently explained:

> In some cases . . . the district court will need to look beyond the patent's intrinsic evidence . . . to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 841 (2015). However, the Federal Circuit has emphasized that such extrinsic evidence is subordinate to intrinsic evidence. *Phillips*, 415 F.3d at 1317 ("[W]hile extrinsic evidence can shed useful light on the relevant art, we have explained

that it is less significant than the intrinsic record in determining the legally operative meaning of claim language." (internal quotation marks omitted)).

B.   35 U.S.C. § 112(6) (pre-AIA) / § 112(f) (AIA)[1]

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112, ¶ 6; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Section 112, Paragraph 6, provides that a structure may be claimed as a "means . . . for performing a specified function" and that an act may be claimed as a "step for performing a specified function." *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002).

But § 112, ¶ 6 does not apply to all functional claim language. There is a rebuttable presumption that § 112, ¶ 6 applies when the claim language includes "means" or "step for" terms and that it does not apply in the absence of those terms. *Masco Corp.*, 303 F.3d at 1326; *Williamson*, 792 F.3d at 1348. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. *See Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015) (stating that § 112, ¶ 6 does not apply when "the claim language, read in light of the specification, recites sufficiently definite structure" (quotation marks omitted) (citing *Williamson*, 792 F.3d at 1349; *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014))); *Williamson*, 792 F.3d at 1349 (stating that § 112, ¶ 6 does not apply when "the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for structure"); *Masco Corp.*, 303 F.3d at 1326 (stating that § 112, ¶ 6 does not apply when the

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[1] Because the application resulting in the '515 Patent was filed before the effective date of the America Invents Act ("AIA"), the Court refers to the pre-AIA version of § 112.

claim includes an "act" corresponding to "how the function is performed"); *Personalized Media Communications, L.L.C. v. International Trade Commission*, 161 F.3d 696, 704 (Fed. Cir. 1998) (stating that § 112, ¶ 6 does not apply when the claim includes "sufficient structure, material, or acts within the claim itself to perform entirely the recited function . . . even if the claim uses the term 'means'") (quotation marks and citation omitted).

When it applies, § 112, ¶ 6 limits the scope of the functional term "to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof." *Williamson*, 792 F.3d at 1347. Construing a means-plus-function limitation involves multiple steps. "The first step . . . is a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). "[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id.* A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* The focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id.* The corresponding structure "must include all structure that actually performs the recited function." *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). However, § 112, ¶ 6 does not permit "incorporation of structure from the written description beyond that necessary to perform the claimed function." *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

III. THE PARTIES' STIPULATED TERMS

The parties submitted in their November 5, 2019 P.R. 4-3 Joint Claim Construction and

Prehearing Statement that "[t]he parties have agreed to the following constructions for U.S. Patent No. 6,452,515 ('the '515 patent'). None." Dkt. No. 115 at 1.

IV.   CONSTRUCTION OF DISPUTED TERMS IN THE '515 PATENT

The '515 Patent, titled "Video Encoder and Decoder," issued on September 17, 2002, and bears an earliest priority date of April 16, 1999. The Abstract of the '515 Patent states:

> A video encoder and decoder are provided for processing a sequence of animated pictures in such a way that an interactive game, such as a puzzle for instance, may be played. Each picture of a movie sequence is divided into a predetermined number of pieces that are then randomly coded (according to the MPEG-4 standard), transmitted and/or stored, decoded and displayed. It is then possible to play with the pieces to reorder them while they are in motion (with possible associated audio), according to predefined rules and ends of scenarios. The left and right buttons of a mouse, or a similar control device, are used to displace either one piece, or a group of attached pieces respectively, in order to verify if the proposed location for a piece is free and possible (no contradiction with any other surrounding piece) and then to drop said piece on the new spot, or, on the contrary, if some contradiction is detected, send back the piece (or, respectively, the group of attached pieces) to its previous location.

A. "means for" terms within Claim 1

Disputed Term	Plaintiff's Proposal	Defendant's Proposal
"means for dividing a screen window occupied by said sequence into X rows and Y columns"	Not governed by 35 U.S.C. §112(6); not indefinite. If construed under U.S.C. §112(6), however, then: **Function:** dividing a screen window occupied by said sequence into X rows and Y columns **Structure:** a video encoder programmed to divide a screen window occupied by said sequence into X rows and Y columns, or equivalents thereof	Indefinite due to absence of corresponding structure (algorithm) in the specification. 35 U.S.C. § 112(2), 112(6). **Function:** "dividing a screen window occupied by said sequence into X rows and Y columns" **Structure/ Algorithm:** None

Disputed Term	Plaintiff's Proposal	Defendant's Proposal
"means for separately encoding each one of the X·Y parts of each picture of the sequence thus obtained"	Not governed by 35 U.S.C. §112(6); not indefinite. If construed under U.S.C. §112(6), however, then: **Function:** separately encoding each one of the X·Y parts of each picture of the sequence thus obtained **Structure:** a video encoder programmed to separately encode each one of the X·Y parts of each picture of the sequence thus obtained, or equivalents thereof	Indefinite due to absence of corresponding structure (algorithm) in the specification. 35 U.S.C. § 112(2), 112(6). **Function:** "separately encoding each one of the X·Y parts of each picture of the sequence thus obtained" **Structure/ Algorithm:** None
"means for associating, to each of said parts, a specific label indicating a position of the part in the window"	Not governed by 35 U.S.C. §112(6); not indefinite. If construed under U.S.C. §112(6), however, then: **Function:** associating, to each of said parts, a specific label indicating a position of the part in the window **Structure:** a video encoder programmed to associate to each of said parts a specific label indicating a position of the part in the window, or equivalents thereof	Indefinite due to absence of corresponding structure (algorithm) in the specification. 35 U.S.C. § 112(2), 112(6). **Function**: "associating, to each of said parts, a specific label indicating a position of the part in the window" **Structure/ Algorithm:** None
"[means] for encoding these labels in a random order"	Not governed by 35 U.S.C. §112(6); not indefinite. If construed under U.S.C. §112(6), however, then: **Function:** encoding these labels in a random order **Structure:** a video encoder programmed to encode the labels in a random order	Indefinite due to absence of corresponding structure (algorithm) in the specification. 35 U.S.C. § 112(2), 112(6). **Function:** "encoding these labels in a random order" **Structure/Algorithm:** None

Shortly before the start of the January 6, 2020 hearing, the Court provided the parties

with the following preliminary constructions for these phrases:

Disputed Term	Court's Preliminary Construction
"means for dividing a screen window occupied by said sequence into X rows and Y columns"	Governed by 35 U.S.C. §112, ¶ 6; not indefinite **Function:** dividing a screen window occupied by said sequence into X rows and Y columns **Structure:** a video encoder programmed to divide the screen window occupied by the sequence into X rows and Y columns as illustrated in Figure 3, or equivalents thereof

Disputed Term	Court's Preliminary Construction
"means for separately encoding each one of the X·Y parts of each picture of the sequence thus obtained"	Governed by 35 U.S.C. §112, ¶ 6; not indefinite **Function:** separately encoding each one of the X·Y parts of each picture of the sequence thus obtained **Structure:** a video encoder programmed to separately encode each one of the X·Y parts of each picture of the sequence thus obtained according to the MPEG standard, or equivalents thereof
"means for associating, to each of said parts, a specific label indicating a position of the part in the window"	Governed by 35 U.S.C. §112, ¶ 6; not indefinite **Function:** associating, to each of said parts, a specific label indicating a position of the part in the window **Structure:** a video encoder programmed to associate to each of said parts a bidimensional label [a, b] indicating the original position of the concerned part in the movie sequence (a varies from 0 to X and b from 0 to Y; therefore, P=X+l and Q=Y+l).
"[means] for encoding these labels in a random order"	**Indefinite due to absence of corresponding structure (algorithm) in the specification** Governed by 35 U.S.C. §112, ¶ 6; **Function:** encoding these labels in a random order **Structure:** None

1. The Parties' Positions

The parties dispute whether the "means for" terms should be governed by 35 U.S.C. § 112 ¶ 6. Plaintiff argues that the claim language itself recites sufficient structure. Dkt. No. 139 at 8. Plaintiff contends that the "means for" limitations collectively define the structural programming of a "video encoder," which is itself understood by persons of ordinary skill in the art as a name for structure. *Id.* In the alternative, Plaintiff contends that the respective function for each is recited by the computational requirements following the "means for" couplet, and that the corresponding structure at least includes the claimed "video encoder" programmed according to those computational requirements. *Id.* at 9.

Plaintiff also argues that the preamble of claim 1 recites "[a] video encoder for processing a sequence of animated pictures, said encoder comprising" each one of the challenged "means for" limitations. *Id.* Plaintiff contends that Defendant's argument that the "means for" limitations recited in the body of claim 1 are part of something other than the claimed "video encoder" is a

misunderstanding of the claim language and fundamental principles of claim construction. *Id.* at 10. Plaintiff argues that the preamble of claim 1 introduces the "video encoder" element and is followed by three "means for" limitations expressly directed to the same structural "video encoder" element. *Id.*

According to Plaintiff, these three "means for" limitations are structurally interrelated with one another at least in that each is recited is being part of the "video encoder" introduced in the preamble. *Id.* Plaintiff contends that the "means for" limitations themselves collectively define an algorithm for accomplishing the explicit purpose recited in the preamble as "processing a sequence of animated pictures" and that the "video encoder" is itself structure that corresponds to each "means for" limitation. *Id.*

Plaintiff further argues that nothing in the specification supports the conclusion that the "video encoder" term is a nonce word or is synonymous with a general-purpose computer. *Id.* Plaintiff contends that the specification is titled "video encoder and decoder." *Id.* Plaintiff further contends that the specification states that "[t]he present invention relates to a video encoder for processing sequences of animated pictures, such as movies, and to a corresponding decoder." *Id.* According to Plaintiff, the "video encoder" introduced in the claim preamble connotes structure, and must itself be considered part of the corresponding structure required for each "means for" term. *Id.* at 11.

In the alternative, Plaintiff argues that the phrase "means for dividing a screen window occupied by said sequence into X rows and Y columns," explicitly ties each "means for" limitation to the structural "video encoder" element introduced in the preamble. *Id.* at 14. Plaintiff further argues that the specification further discloses sufficient algorithmic structure corresponding to this limitation. *Id.* (citing '515 Patent at 1:5–7, 1:49–53, 2:36–39, 2:55–62, 3:5–14, 3:34–39, 3:52–60,

Figures 3–5, 7).

Plaintiff also argues that corresponding structure for the phrase "means for separately encoding each one of the X·Y parts of each picture of the sequence thus obtained" includes "a video encoder programmed to separately encode each one of the X·Y parts of each picture of the sequence thus obtained, or equivalents thereof." *Id.* at 16. Plaintiff contends that the specification further discloses sufficient algorithmic structure corresponding to this limitation. *Id.* at 14 (citing '515 Patent at 1:5–7, 1:49–55, 2:39–41, 2:55–3:8, 3:34–51, & Figures 4 and 5).

Plaintiff further argues that corresponding structure for the phrase "means for associating, to each of said parts, a specific label indicating a position of the part in the window, and for encoding these labels in a random order" includes "a video encoder programmed to separately associate, to each of said parts, a specific label indicating a position of the part in the window, and for encode these labels in a random order, including equivalents thereof." *Id.* at 17. Plaintiff contends that the specification further discloses sufficient algorithmic structure corresponding to this limitation. *Id.* at 18 ('515 Patent at 1:5–7, 1:49–58, 2:36–39, 2:59–62, 2:63–65, 3:20–23, 5:53–57, 6:8–15, 6:30–40, Figures 3, 15–17).

Defendant responds that the specification describes only the output of an algorithm for the function "dividing a screen window occupied by said sequence into X rows and Y columns" and not the algorithm itself. Dkt. No. 148 at 11 (citing '515 Patent at 2:36–38, 2:55–56). Defendant argues that the specification gives no explanation for how to divide the screen into parts. *Id.* Defendant also argues that the specification's reference to encoding "according to the MPEG-4 standard" does not provide an algorithm as required by § 112 ¶ 6. *Id.* at 12 (citing '515 Patent at Figure 4). Defendant further argues that the specification's disclosure of "the realization of an MPEG-4 puzzle of M×N pieces" lacks the requisite algorithm because it gives no explanation

regarding how this process would be carried out. *Id.* at 13 (citing '515 Patent at 3:34–45).

Defendant also contends that Figure 7 merely shows an image of a software interface and does not

disclose an algorithm. *Id.* at 12. Defendant also argues that Plaintiff failed to demonstrate that the

claim and specification recite any structure for performing the claimed functions other than a

general-purpose computer, which thus requires an algorithm for performing the claimed function.

Id. at 14.

Regarding the phrase "means for separately encoding each one of the X·Y parts of each

picture of the sequence thus obtained," Defendant argues that the specification does not disclose

an algorithm or programming for performing the function. *Id.* at 15 (citing Dkt. No. 148-3 at ¶¶

35, 36). Defendant contends that a mere reference to a standard does not disclose corresponding

structure. *Id.* Defendant also argues that the specification touches upon the types of data encoded

when the MPEG-4 standard is used, without describing how that data is used to encode. *Id.* at 16

(citing '515 Patent at 1:9–20). According to Defendant, the specification discloses only a general-

purpose computer for implementing the claimed function of "separately encoding each one of the

X·Y parts of each picture of the sequence thus obtained." *Id.* at 17 (citing Dkt. No. 148-3 at ¶ 26).

Regarding the phrase "means for associating to each of said parts, a specific label indicating

a position of the part in the window," Defendant argues that the specification does not disclose the

algorithm by which the labels are associated with each part of the movie with the requisite

specificity. *Id.* (citing Dkt. No. 148-3 at ¶ 40). Defendant further argues that the specification also

does not disclose the algorithm by which labels are associated with parts of the movie. *Id.* (citing

Dkt. No. 148-3 at ¶ 41). According to Defendant, the only other references in the specification that

address the labels mentioned in this claim limitation are directed to how they are used after they

have been associated with the parts of the movie. *Id.* (citing '515 Patent at 3:19–22 & 4:11–15).

Defendant argues that disclosing how the claimed labels are used after they have already been associated with parts of the movie is not the same as disclosing the algorithm by which those labels are associated with the parts of the movie. *Id.*

Defendant also contends that even though the specification describes labels as being two-dimensional descriptors of a part's location, such a disclosure falls far short of showing how a label is associated with a part of the window and thus lacks the necessary algorithm. *Id.* at 18. Defendant next contends that Plaintiff incorrectly combines the terms and functions (1) "for associating, to each of said parts, a specific label indicating a position of the part in the window," and (2) "for encoding these labels in a random order," as a single "means for" term. *Id.*

Regarding the phrase "means . . . for encoding these labels in a random order," Defendant argues the specification does not disclose the requisite algorithm for performing the function of encoding labels in random order. *Id.* at 19. Defendant further argues that the specification mentions random ordering of the parts of the movie sequence. *Id.* (citing '515 Patent at 2:63–65, 3:9–11, 3:56–60). Defendant contends that the specification does not detail an algorithm that describes how the invention encodes labels at all, let alone an algorithm for encoding labels in random order. *Id.* at 20 (citing Dkt. No. 148-3 at ¶¶ 44, 45).

Defendant contends that it is not technically possible for a label to be encoded, because a label is nothing more than a bi-dimensional descriptor of the original position of a part of the video. *Id.* (citing Dkt. No. 148-3 at ¶¶ 23, 45). Defendant argues that label is not amenable to being encoded in the same manner as a video, because a label does not contain data equivalent to that contained in a video. *Id.*

Plaintiff replies that each challenged term is structurally tied to the "video encoder" element, which has a sufficiently definite meaning as the name for structure Dkt. No. 151 at 5.

Plaintiff next contends that the challenged limitations collectively recite objectives and operations of the "video encoder" element. *Id.* Plaintiff further contends that the required structural arrangements of the "video encoder" are made explicit by the recited objectives and operations of the challenged limitations. *Id.*

Plaintiff also argues that it provided ample evidence that the term 'video encoder' is a structural term. *Id.* at 6–7. Plaintiff contends that Defendant cites no intrinsic evidence to support a conclusion that the claimed "video encoder" element is merely a nonce term. *Id.* at 7. Plaintiff further argues that the record includes Defendant's admission that the claimed "video encoder" element denotes sufficiently definite structure. *Id.* at 7–9.

Plaintiff next argues that Defendant fails to meet its burden to prove that any of the three challenged limitations invokes the requirement that the patent specification must disclose a corresponding algorithm. *Id.* at 9–11. Plaintiff contends that Defendant has repeatedly asserted that each challenged "means for" limitation is itself properly characterized as "programming" that is a part of a larger program executable on a general purpose computer. *Id.* at 11. Plaintiff also contends that it expressly identifies structure, recited in the claim language itself, for each challenged limitation. *Id.* Plaintiff argues that this includes the claimed "video encoder" element because it is structurally tied to each of the challenged limitations. *Id.* Plaintiff contends that nothing in the specification supports the conclusion that the video encoder is itself synonymous with a general-purpose computer. *Id.* at 12.

Plaintiff also argues that the "means for" limitations themselves collectively define an algorithm for accomplishing the explicit purpose recited in the preamble as "processing a sequence of animated pictures." *Id.* Plaintiff repeats that each challenged limitation recites programming that is structurally tied to the claimed "video encoder." *Id.* According to Plaintiff, Defendant has

tacitly suggested that "video encoder" element itself inherently connotes algorithmic structure, because video encoders process data in "steps" when encoding video. *Id.* Finally, Plaintiff contends that these "steps" would collectively comprise an algorithm for encoding video. *Id.*

2. Analysis

The disputed phrases use the words "means" and specify a function, thus the Court presumes that the patentees intended to invoke the statutory mandates for means-plus-function clauses. The "presumption falls, however, if the claim itself recites sufficient structure to perform the claimed function." *Envirco Corp. v. Clestra Cleanroom, Inc.*, 209 F.3d 1360, 1364 (Fed. Cir. 2000). Plaintiff contends that the claim language itself recites sufficient structure because the "means for" limitations collectively define the structural programming of "video encoder." Dkt. No. 139 at 8. Plaintiff further argues that the structural programming "video encoder" element introduced in the preamble is followed by three "means for" limitations expressly directed to the same structural "video encoder" element. *Id.* at 10. According to Plaintiff, the "video encoder" is itself understood by persons of ordinary skill in the art as a name for structure.

The issue is not whether the term "video encoder," when consider in a vacuum, indicates sufficient structure. Instead, the issue is whether a person of ordinary skill in the art would understand a "video encoder" as used in the context of the claim as a whole recites sufficient structure given the patentee's choice to invoke the means-plus-function format. The Court previously found that terms like "processor," do recite sufficient structure when considered in the context of the claims. (139 at 9, 11, 14, 16, 17). For example, in *Smartflash LLC v. Apple Inc.*, 77 F. Supp. 3d 535, 562-63 (E.D. Tex. 2014) the Court noted that the claims recited how the processor terms were connected with other claim limitations and those connections were described in the patents. Likewise, in *Advanced Mktg. Sys., LLC v. CVS Pharm., Inc.*, Case No. 6:15-cv-134-JRG-

KNM, 2016 U.S. Dist. LEXIS 58472, at **67-68 (E.D. Tex. May 3, 2016), the Court noted that

the "claims at issue provide further evidence of structure by describing physical connections

between the data processor and other claimed elements."

However, in contrast to *Smartflash and Advanced Mktg*, the patentee explicitly invoked 35

U.S.C. § 112, ¶ 6 by using the words "means" followed by a function. Moreover, the claim

language does not recite sufficient structure to perform the claimed functions. Accordingly, the

Court finds that Plaintiff has failed to overcome the presumption that the phrases are governed by

35 U.S.C. § 112, ¶ 6. *See, e.g., St. Isidore Research, LLC v. Comerica Inc.*, No. 2:15-cv-1390-

JRG-RSP, 2016 U.S. Dist. LEXIS 126866, at *49 (E.D. Tex. Sep. 18, 2016) ("Here how the

'processor configured to . . .' terms operate with the other claimed components is not sufficiently

recited or described. As such, the 'processor configured to . . .' terms are governed by § 112, ¶

6.").

Furthermore, the Federal Circuit's decision in *Net MoneyIN, Inc. v. VeriSign,* Inc. suggests

that § 112, ¶ 6 applies here. *See* 545 F.3d 1359, 1366 (Fed. Cir. 2008). In that case, the claim

required a "first bank computer including means for generating an authorization indicia . . . ." *Id*.

at 1364. While the plaintiff argued that the claims recitation of a bank computer was sufficient to

rebut the means-plus-function presumption, the Federal Circuit ultimately disagreed:

> The bank computer is not linked in the claim as the "means" for
> generating an authorization indicia. Rather, the bank computer is
> recited as "including" those means. [Plaintiff's] argument that the
> first bank computer constitutes sufficient structure would require the
> first bank computer to include a first bank computer, which is both
> redundant and illogical. Because the claimed generating means is a
> subset of the bank computer, there must be a recitation of structure
> that is a component of the bank computer to rebut the presumption.
> The claim contains no such recitation. As a result, the district court
> correctly concluded that the presumption of means-plus-function
> treatment had not been overcome.

Id. at 1366.

Similar to the claims in *Net MoneyIn*, the claims here require that the video encoder comprises means for accomplishing various functions, so "there must be a recitation of structure that is a component of the [video encoder] to rebut the presumption." *Id*. Thus, the recitation of a video encoder itself is insufficient to rebut the presumption that § 112, ¶ 6 applies.

Having determined that the phrases are subject to 35 U.S.C. § 112, ¶ 6 and that Plaintiff has failed to rebut the presumption, the Court's focus turns to determining the proper construction. Section 112 (6) "recites a mandatory procedure for interpreting the meaning of a means-plus-function or step-plus-function claim element. The claim limitations 'shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.' 35 U.S.C.A. § 112, ¶ 6" *Al-Site Corp. v. VSI Intern., Inc.*, 174 F.3d 1308, 1320 (Fed. Cir. 1999). To that end, the construction of a means-plus-function limitation involves two steps. "First, we determine the claimed function. Second, we identify the corresponding structure in the written description that performs that function. Determining a claimed function and identifying structure corresponding to that function involve distinct, albeit related, steps that must occur in a particular order." *JVW Enterprises, Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1330 (Fed. Cir. 2005).

Having reviewed the intrinsic evidence, the Court finds that the recited function and corresponding structure for each phrase is as follows. For the phrase "means for dividing a screen window occupied by said sequence into X rows and Y columns," the parties agree that the recited function is "dividing a screen window occupied by said sequence into X rows and Y columns." Regarding the corresponding structure, the specification explicitly states that it is the encoder that processes the sequence of animated pictures. Specifically, the specification states that "[t]he present invention relates to a video encoder for processing sequences of animated pictures, such

as movies, and to a corresponding decoder." '515 Patent at 1:5–8, *see also id.* Abstract ("A video encoder and decoder are provided for processing a sequence of animated pictures in such a way that an interactive game, such as a puzzle for instance, may be played.").

For mean-plus-function limitations implemented by computer software, the corresponding structure described in the patent specification must include an algorithm for performing the function. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). Here, the specification discloses that the algorithm for performing the function of "dividing a screen window occupied by said sequence into X rows and Y columns" is illustrated in Figure 3. Specifically, the specification states that "FIG. 3 illustrates the principle of the sub-division of a movie sequence into X.Y parts to which a bidimensional label is associated." '515 Patent at 2:35–37. The specification further states that "[t]he movie sequence is divided into P rows and Q columns, as illustrated in FIG. 3." *Id.* at 3:55–56.

Defendant argues that Figure 3 only depicts the result of dividing the screen into parts, and not the algorithm used to accomplish that result. The Court disagrees with Defendant's analysis. "The specification can express the algorithm in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." *UUSI, LLC v. United States*, 131 Fed. Cl. 244, 271 (2017) (citation and internal quotations omitted). In other words, there is not a requirement for a particular from of disclosure, such as a flowchart. Moreover, the "algorithm" for the corresponding structure of a computer-implemented means-plus-function limitation does not require actual source code. *See Typhoon Touch Technologies, Inc. v. Dell, Inc.*, 659 F.3d 1376, 1385–86 (Fed. Cir. 2011) ("For computer-implemented procedures, the computer code is not required to be included in the patent specification."). Indeed, "[a] description of the function in words may 'disclose, at least to the

satisfaction of one of ordinary skill in the art, enough of an algorithm to provide the necessary structure under §112, ¶ 6." *Id.* at 1386 (citing *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008). Here, Figure 3 and the related description discloses, at least to the satisfaction of one of ordinary skill in the art, the corresponding structure for performing the recited function of "means for dividing a screen window occupied by said sequence into X rows and Y columns."

For the phrase "means for separately encoding each one of the X·Y parts of each picture of the sequence thus obtained," the parties agree that the recited function is "separately encoding each one of the X·Y parts of each picture of the sequence thus obtained." Regarding the corresponding structure, the specification discloses that each one of the X·Y parts of each picture of the sequence is separately encoded according to the MPEG standard. Specifically, the specification states that "[t]he movie sequence is divided into P rows and Q columns, as illustrated in FIG. 3, and each part of the movie is separately encoded according to the MPEG-4 standard" '515 Patent at 2:55–57, *see also id.* at 3:44–51. The specification further states the following:

> The MPEG-4 International Standard, described, for instance, in "Overview of the MPEG-4 Version 1 Standard" (document ISO/IEC JTC1/SC29/WG11 N1909, October 1997, Fribourg, Switzerland), is an object-based standard for multimedia. This means that the MPEG-4 standard is not only able to encode video pictures, as usually considered on a television screen, but it can also handle video data including shapes and textures within these shapes.

'515 Patent at 1:9–16.

Defendant argues that the specification's mere reference to encoding "according to the MPEG-4 standard" does not provide an algorithm as required by § 112 ¶ 6. The Court disagrees. Again, the disclosed algorithm does not need to be source code. Moreover, consistent with the specification, Defendant concedes that the MPEG-4 standard "sets forth governing guidelines as to how video should be encoded so that it can be decoded." Dkt. No. 148 at 12 n.1.

For the phrase "means for associating, to each of said parts, a specific label indicating a position of the part in the window," the parties agree that the recited function is "associating, to each of said parts, a specific label indicating a position of the part in the window." Regarding the corresponding structure, the specification states that the specific label is a bidimensional label and discloses how it is calculated based on positional difference relative to a reference. Specifically, the specification discloses "a bidimensional label [a, b] indicating the original position of the concerned part in the movie sequence (a varies from 0 to X and b from 0 to Y; therefore, P=X+1 and Q=Y+1)" '515 Patent at 2:59–62. Defendant argues that this portion of the specification "does not disclose the algorithm by which the labels are associated with each part of the movie with the requisite specificity." Dkt. No. 148 at 17. The Court disagrees. Again, the disclosed algorithm does not need to be source code, and the specification discloses more than a "black box."

For the phrase "[means] for encoding these labels in a random order," the parties agree that the recited function is "encoding these labels in a random order." Regarding the corresponding structure, the specification does not disclose any algorithm for performing the function of encoding labels in random order. Plaintiff contends that the structure is "a video encoder programmed to encode the labels in a random order," but it does not point to any intrinsic evidence that discloses an algorithm for performing the claimed function. The specification does mention random ordering of the parts of the movie sequence. Specifically, it states that "[t]he encoded parts of the movie sequence are then, *in a random order*, either transmitted (real-time transmission) or locally stored, on a disk or on a separate server." '515 Patent at 2:63–65 (emphasis added). It also mentions that "[t]he MPEG-4 visual objects, which represent the different parts of the original movie sequence may be restituted and displayed *in a random order . . . ." Id.* at 3:9–11 (emphasis added); *see also id.* at 3:56–60.

However, the specification does not provide an algorithm or otherwise that describes how to encode labels, let alone an algorithm for encoding labels in a random order. As discussed above, the only type of encoding discussed in the specification is encoding parts of the movie sequence according to the MPEG-4 standard. During the January 6, 2020 hearing, Plaintiff argued that the specification states that "[e]ach picture of a movie sequence is divided into a predetermined number of pieces that are then randomly coded (according to the MPEG-4 standard)." '515 Patent at Abstract. As discussed above, the specification makes clear that the only encoding disclosed is encoding parts of the movie sequence according to the MPEG-4 standard. Consistent with the other portions of the specification cited above, the Abstract is referring to coding and not randomization. Therefore, this claim element is indefinite because the specification does not disclose an algorithm for performing the recited function of "encoding these labels in a random order." Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

In light of the evidence, the Court finds that the phrase **"means for dividing a screen window occupied by said sequence into X rows and Y columns"** is governed by 35 U.S.C. § 112, ¶ 6 and construes the phrase as follows:

- **<u>Function</u>: "dividing a screen window occupied by said sequence into X rows and Y columns"**

- **<u>Corresponding Structure</u>: A video encoder programmed to divide the screen window occupied by the sequence into X rows and Y columns as illustrated in Figure 3, or equivalents thereof.**

The Court finds that the phrase **"means for separately encoding each one of the X·Y**

parts of each picture of the sequence thus obtained" is governed by 35 U.S.C. § 112, ¶ 6 and construes the phrase as follows:

- **<u>Function</u>: "separately encoding each one of the X·Y parts of each picture of the sequence thus obtained"**

- **<u>Corresponding Structure</u>: A video encoder programmed to separately encode each one of the X·Y parts of each picture of the sequence thus obtained according to the MPEG standard, or equivalents thereof.**

The Court finds that the phrase **"means for associating, to each of said parts, a specific label indicating a position of the part in the window"** is governed by 35 U.S.C. § 112, ¶ 6 and construes the phrase as follows:

- **<u>Function</u>: "associating, to each of said parts, a specific label indicating a position of the part in the window"**

- **<u>Corresponding Structure</u>: A video encoder programmed to associate to each of said parts a bidimensional label [a, b] indicating the original position of the concerned part in the movie sequence (a varies from 0 to X and b from 0 to Y; therefore, P=X+l and Q=Y+l).**

The Court finds that the phrase **"[means] for encoding these labels in a random order"** is governed by 35 U.S.C. § 112, ¶ 6. The Court also finds that this phrase is **indefinite** for failure to disclose corresponding structure.

B. The Preamble of Claim 1

Disputed Term	Plaintiff's Proposal	Defendant's Proposal
"A video encoder for processing a sequence of animated pictures, said encoder comprising"	Preamble is limiting and "video encoder" is a name for structure that performs the "means for" limitations.	The preamble is not limiting, Further, the term "video encoder," as used in claim 1, does not connote structure, and, even if it were to connote structure, it is not the structure used to perform all of the limitations of claim 1.

Shortly before the start of the January 6, 2020 hearing, the Court provided the parties with the following preliminary construction for this term: Preamble is limiting.

1. The Parties' Positions

The parties dispute whether the preamble of claim is limiting. Plaintiff argues that the preamble of claim 1 recites "[a] video encoder for processing a sequence of animated pictures, said encoder comprising" each one of the challenged "means for" limitations. Dkt. No. 139 at 9. Plaintiff further argues that the preamble is limiting because it supplies antecedent basis for "said sequence" recited in the body of claim 1. *Id.* Plaintiff also argues that the preamble of claim 1 introduces the "video encoder" element and is then followed by three "means for" limitations expressly directed to the same structural "video encoder" element. *Id.* at 10.

Plaintiff contends that each one of the "means for" limitations further structurally defines the recited "video encoder" introduced in the preamble by setting forth respective computational operations corresponding to the functional description of the "video encoder" set forth in the preamble. *Id.* According to Plaintiff, the "video encoder" introduced in the claim preamble connotes structure and, consequently, must itself be considered part of the corresponding structure required for each "means for" terms. *Id.* at 11.

Defendant responds that video encoders were implemented on general-purpose computers at the time of the filing of the '515 Patent. Dkt. No. 148 at 20 (citing Dkt. No. 148-3 at ¶ 26). Defendant contends that the specification only discloses using a general-purpose computer to

implement the purported inventive aspects of the patent. *Id.* (citing Dkt. No. 148-3 at ¶ 26; '515 Patent at 2:18–25, 2:42–45, 2:63–65, 3:2–5, 3:15–19, 3:56–60, 5:3–10). Defendant argues that Plaintiff does not provide any evidence showing that the term "video encoder" is a structural term. *Id.* at 21. Finally, Defendant contends that the patents cited by Plaintiff support Defendant's arguments that encoders are implemented on general-purpose computers. *Id.* at 24.

Plaintiff replies that it is undisputed that the preamble of claim 1 is limiting for at least two reasons. Dkt. No. 151 at 5. Plaintiff argues that the "video encoder" element introduced in the preamble expressly limits the structure of each challenged term. *Id.* Plaintiff further argues that the preamble supplies antecedent basis for "said sequence" recited in the body of claim 1. *Id.*

2. Analysis

The Court finds that the preamble is limiting because it recites essential structure and because it is "necessary to give life, meaning and vitality" to the claim. *Poly-Am., L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1309 (Fed. Cir. 2004). The specification indicates that the claims are directed to processing movies using an encoder. Specifically, the specification states that "[t]he present invention relates to a video encoder for processing sequences of animated pictures, such as movies, and to a corresponding decoder." '515 Patent at 1:5–8, *see also id.* at Abstract ("A video encoder and decoder are provided for processing a sequence of animated pictures in such a way that an interactive game, such as a puzzle for instance, may be played."). Thus, the specification indicates that a video encoder is essential to the claim.

Moreover, the "video encoder" element introduced in the preamble provides context for the means-plus-function phrases. That is, the video encoder is "for processing a sequence of animated pictures" based on the disclosed algorithm related to the means-plus-function phrases. The preamble also supplies antecedent basis for "said sequence" recited in the body of claim 1.

Accordingly, the Court finds that "the preamble is essential to understand[ing] limitations or terms in the claim body." *Catalina Mktg. Int'l Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

For the reasons set forth above, the **preamble of claim 1 is limiting**.

V. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered to not refer to each other's claim construction positions in the presence of the jury. Likewise, in the presence of the jury, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court. The Court's reasoning in this order binds the testimony of any witnesses, and any reference to the claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 4th day of February, 2020.

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ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE